

1015  
Exd 27 Folder 59



Digitized by the Internet Archive  
in 2019 with funding from  
Boston Public Library

<https://archive.org/details/adoctoralproblem00unse>

A Doctoral Problem in Physical Anthropology  
presented to the Department of Anthropology  
in fulfillment of the requirements for the  
Degree of Doctor of Philosophy.

by

Richard S. MacNeish

January 22, 1945



## The Problem

In his book "Races of Europe" Coon by the use of such terms as Corded, Bell-Beaker, Ladogan, etc., presumes a rather close racial correlation between cultural development and geographical distribution. What evidence for this racio-archaeological correlation can be found in the Upper and Middle Mississippi cultures?

CHAPTER I

The first part of the book is devoted to a general survey of the subject. It begins with a definition of the term "philosophy" and then proceeds to a discussion of the various branches of the subject. The author then discusses the history of philosophy and the different schools of thought. The book is written in a clear and concise style and is suitable for students of philosophy.



## Chapter I

### Introduction

Before attempting to examine the evidence of a close racio-archaeological correlation in the Upper and Middle Mississippi culture, I believe that I should examine the manner in which this concept of a close racio-culture correlation was employed by Coon in his book "Races of Europe." Coon's book was primarily an attempt to describe the racial types of Europe. At the outset, however, Coon found that any definition of "Race as a group of people reasonably unified in the physical sense and living in one place" was inadequate when applied to human types found in Europe.<sup>1</sup> For this inadequacy he gave two reasons. First, one could not "draw the borderline between that place and the next," and, second, one could not tell "where one race leaves off and the next begins."<sup>2</sup> He believed though that this dilemma might be resolved "with the application of a third dimension, that of history."<sup>3</sup> History, with numerically adequate and competently documented physical data, might show what places were centers of racial dispersion, what the races were, and which places had functioned as points of intermediacy and blending. Therefore, Coon reconstructed the racial and cultural history of Europe,

<sup>1</sup>Coon, Carleton A. "The Races of Europe". New York. The Macmillan Company, 1939. P. 11.

<sup>2</sup>Ibid. P. 11.

<sup>3</sup>Ibid. P. 12.





and ultimately created a classification of races in Europe based on the geographical location of the groups, the physical characteristics of the groups and history of those groups. In reconstructing the racial history of Europe, the assumption implicit in his writing is that when two groups are found to have been of the same racial type this indicates that there existed a genetic connection between those groups and their separation has been caused by migration and later isolation. He also presumes that many of these racial migrations were accompanied by diffusion of certain cultural complexes. Thus he speaks of Corded, Ladogan, Bell-Beaker, etc. migrations in which a race with its correlative culture moved in Europe. (A criticism or evaluation of his work is not attempted in this paper as it seems irrelevant to the problem at hand.)

As may now be apparent the problem I am attempting to solve is of a different nature from the one of Coon. Coon attempted to define the physical types of Europe by describing their physical characteristics, geographical location, and history. In presenting his history, he indicated or assumed that often physical types were highly correlated with culture types. My problem is quite the reverse, for I shall attempt to indicate that a high correlation exists between certain American races and the Upper and Middle Mississippi culture. To show this correlation it will be necessary to describe the history and location of these cultures, and to examine the physical types that



occur in each. In presenting the racio-archaeological connections, I shall, in passing, define the races of that area. Thus, the problem fundamental for Coon I shall but touch upon, while the problem of racio-cultural correlation, that Coon merely used as a tool and took little notice of, will be of foremost importance in this paper.

Since I shall deal with a variety of different types of data in the solution of the problem, I believe that I should here state the method I shall use, and thus indicate the manner in which the various topics are logically connected. The method may briefly be stated as follows: First, I shall define the Upper and Middle Mississippi cultures and briefly indicate what is known of their histories; next, I shall discuss the racial classifications that have been applied to the people of the Upper and Middle Mississippi area (and the rest of North America), then I shall present a selected series of anthropometric data for the various cultural divisions of the Mississippi patterns which will indicate what racial types may be closely correlated with the two cultures; and, finally, I shall summarize the evidence for a close racio-cultural correlation in the Upper and Middle Mississippi culture.





## Chapter II

### The Middle and Upper Mississippi Cultures

Archaeologically the culture content of the Upper and Middle Mississippi phases has long been known. The history of these two phases is not yet fully worked out, but recently great steps in that direction have been undertaken. For this reason, I shall briefly define the Upper Mississippi and Middle Mississippi phases, then, on a more speculative plane, present their histories, as I see them.

Dr. Thorne Duell, in Appendix I, entitled "The Application of a Classificatory Method to Mississippi Valley Archaeology" in Rediscovering Illinois, page 207 to 226, defined the Middle Mississippi as that archaeological manifestation whose culture assemblage includes the following diagnostic traits:

1. Truncated pyramidal mounds, often in groups, employed primarily as substructures
2. Houses with rectangular floor outlines
3. Wattle and daub house walls
4. Equal-armed pipes in varieties other than the projecting stemmed
5. The employment of marine, cut marine shells and pearls for personal adornment
6. Pottery: effigy, beaker, plate and other specialized forms of common occurrence
7. Pottery: two or more wares present
8. Pottery: narrow, trailing, incising (whole clay is plastic) scratching, etching etc. (after drying or firing) are the chief techniques of decoration

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO LIBRARY

THE UNIVERSITY OF CHICAGO LIBRARY

THE UNIVERSITY OF CHICAGO LIBRARY

THE UNIVERSITY OF CHICAGO LIBRARY

THE UNIVERSITY OF CHICAGO LIBRARY

THE UNIVERSITY OF CHICAGO LIBRARY

THE UNIVERSITY OF CHICAGO LIBRARY

THE UNIVERSITY OF CHICAGO LIBRARY

THE UNIVERSITY OF CHICAGO LIBRARY

THE UNIVERSITY OF CHICAGO LIBRARY

THE UNIVERSITY OF CHICAGO LIBRARY

THE UNIVERSITY OF CHICAGO LIBRARY

THE UNIVERSITY OF CHICAGO LIBRARY

THE UNIVERSITY OF CHICAGO LIBRARY

THE UNIVERSITY OF CHICAGO LIBRARY

THE UNIVERSITY OF CHICAGO LIBRARY

THE UNIVERSITY OF CHICAGO LIBRARY

THE UNIVERSITY OF CHICAGO LIBRARY

THE UNIVERSITY OF CHICAGO LIBRARY

THE UNIVERSITY OF CHICAGO LIBRARY

THE UNIVERSITY OF CHICAGO LIBRARY

THE UNIVERSITY OF CHICAGO LIBRARY

THE UNIVERSITY OF CHICAGO LIBRARY

THE UNIVERSITY OF CHICAGO LIBRARY

THE UNIVERSITY OF CHICAGO LIBRARY



9. Pottery: designs commonly include bands or chains of backward triangles, arches, scrolls and spirals
10. Pottery trowels
11. Awl-sharpener."

The following were given as Upper Mississippi phase determinate traits:

- "1. Mounds produced incidental to burial
2. Houses with circular or elliptical floor outlines
3. Pipe: projecting, star variety of equal-armed type
4. Personal adornment, use of perforated canine teeth of animals
5. Pottery: common olla generally sole form
6. Pottery: a utilitarian ware usually only one present
7. Pottery: chief technique of decoration are trailing, broad-line incising and punctuating
8. The drawhawe (bone beamer)
9. The flat, perforated needle from deer ribs and other animal bones."

The history of Middle Mississippi has seldom been dealt with by archaeologists in publication, though I believe that all of them, upon being questioned, would probably present a very similar history of that culture. The picture here presented is largely taken from the article

by Ford and Willey in the American Anthropologist, Vol. , 194 .

The Middle Mississippi culture seems to have been born somewhere in the south along the Mississippi River. The most plausible ancestor that has thus far been brought forth is the



Troyville culture of Louisiana. Many of the culture elements of the Middle Mississippi had a Middle American similarity, so that it has been hypothesized that these elements, thrust upon the Troyville culture gave rise to the Coles Creek culture. This in turn gave rise to all the other Middle Mississippi manifestations. Around 1300 it appears that the members of this southern culture migrated northward along the river and established their culture anew. Rather late in the Middle Mississippi culture period further Mexican elements appeared to form the Buzzard Cult. Just previous to the time of French colonization there was a gradual retreat southward of this Middle Mississippi, and in historic times the French found various Muskogean people possessing a Middle Mississippi culture and living south of the Ohio River. On purely archaeological grounds, one might expect to find that the Middle Mississippi culture, since it had been carried by the migration of its originators, had a uniform physical type. The validity of this hypothesis will be tested later in this paper.

The history of the Upper Mississippi culture is probably less well known than that of Middle Mississippi phase. Dr. James Griffin of the University of Michigan, however, has recently contributed much to our knowledge of Upper Mississippi and, presently will publish a paper on its history in the Michigan Academy of Science papers. I have seen the manuscript form of this paper, and the history of Upper Mississippi here presented will be based upon it.

The first part of the book is devoted to a general introduction to the subject of the history of the English language. It begins with a discussion of the early forms of the language, such as Old English, Middle English, and Modern English. The author then discusses the influence of various factors on the development of the language, including contact with other languages, social changes, and technological advances. The second part of the book is a detailed study of the history of the English language from the beginning of the 15th century to the present. It covers the development of the language in different periods, such as the 15th, 16th, 17th, 18th, 19th, and 20th centuries. The author discusses the changes in the vocabulary, grammar, and pronunciation of the language over time. The third part of the book is a study of the English language in different contexts, such as in literature, in science, and in everyday life. The author discusses the role of the English language in different cultures and societies. The fourth part of the book is a study of the English language in different regions, such as in North America, in Europe, and in Asia. The author discusses the differences in the English language in different regions and the reasons for these differences. The fifth part of the book is a study of the English language in different social classes, such as in the upper class, in the middle class, and in the lower class. The author discusses the differences in the English language in different social classes and the reasons for these differences. The sixth part of the book is a study of the English language in different professions, such as in law, in medicine, and in business. The author discusses the differences in the English language in different professions and the reasons for these differences. The seventh part of the book is a study of the English language in different countries, such as in the United States, in Great Britain, and in Australia. The author discusses the differences in the English language in different countries and the reasons for these differences. The eighth part of the book is a study of the English language in different cultures, such as in American culture, in British culture, and in Australian culture. The author discusses the differences in the English language in different cultures and the reasons for these differences. The ninth part of the book is a study of the English language in different times, such as in the past, in the present, and in the future. The author discusses the differences in the English language in different times and the reasons for these differences. The tenth part of the book is a study of the English language in different places, such as in the city, in the country, and in the world. The author discusses the differences in the English language in different places and the reasons for these differences. The book is a comprehensive study of the history of the English language and its development over time. It is a valuable resource for anyone interested in the history of the English language.



Dr. Griffin treats Upper Mississippi as a blend of Middle Mississippi and Woodland.<sup>3a</sup> This blending took place in varying degrees, and the different degrees of blending formed the various aspects of the Upper Mississippi phase. The Iroquois aspect is seen as a basically Woodland culture that received second-hand influences from Middle Mississippi.<sup>4</sup> "The Fort Ancient aspect... represents a Middle Mississippi offshoot which merged culturally with a basic Woodland group."<sup>5</sup> The Madisonville and Dunn foci of this aspect culturally seem to represent a strong Middle Mississippi influence with few Woodland elements; while the Anderson and Foert group seem to have been basically a Woodland group, only tinged by Middle Mississippi. The Fisher focus of an unknown aspect of the Upper Mississippi phase appears to be a merging basic Middle Mississippi group with but a touch of Woodland. Dr. Griffin at present believes that the Oneota aspect of Upper Mississippi is a Middle Mississippi culture that had diffused into a Woodland territory (like Aztalan) and that in turn was influenced by Plains Mississippi.<sup>7</sup> Certain foci of the Oneota aspect have been identified as Iowan (the Innabago, Iowa, Oto, and Joppe.) Speculation based upon our archaeological evidence would lead one to the conclusion that the Upper Mississippi culture (since it is a mixture of Woodland and Middle Mississippi) will probably have a low racial correlation.

<sup>3a</sup> Griffin, James. The Fort Ancient Aspect. University of Michigan Press, 1943. Chapter IV.

<sup>4</sup> Griffin, James. "The Iroquois in American Prehistory." Papers of the Michigan Acad. of Science, Art, and Letters. Vol. XIII, 1943.

<sup>5</sup> Ibid. Note 3, page 508.





6 cont. John Griffin, personal communication

7 Griffin, James. "The Iroquois in American Prehistory."  
Note 3, Page 300.



### Chapter III

#### The Races of North America with particular reference to the Middle and Upper Mississippi Areas

Since the conceptual framework of the problem of this paper has been derived from Coen, I shall define race in his terms:—"...a group reasonably unified in the physical sense" (i.e.- have a number of physical characteristics in common) "and living in one place."<sup>9</sup> Fortunately, this basic definition need not be here questioned (as Coen seemed necessary in discussing the races of Europe) since the dilemma of overlapping physical types and areas did not occur in Upper and Middle Mississippi times. From the dates at hand it would appear that the races of this area may be easily recognized as to their physical characteristics and geographical location.

The races of this area, however, have been poorly defined. The reasons for their faulty definition are numerous, the most prevalent ones being: subjective bias, inadequate measurements, and poor terminology. I therefore believe that it is necessary to deal briefly with a few of the poorer classifications in order to illustrate why I have accepted the particular definition used here.

The first classification of American Indian races that I shall consider is the one originated by Dixon. He has classified the American Indians into eight groups: Proto-Australoids, proto-Negroids, Eur-Asi, Mediterraneans, Palae-Asians, Alpines, Mongoloids, and Ural types. His classification is based upon three indices: cephalic, length-height and nasal indices. Furthermore he believes that these various races owe their existence to migrations of similarly mixed people from the old world. My objections are obvious. The nomenclature used by Dixon, infers genetic relationships that are totally unproven, the criteria used for racial classification (three indices) are very

---

9. Coen, ibid., p. 11.





tenuous, and the derivation of these races has no substantiating evidence.

The second classification which I shall discuss has received wide <sup>11</sup> recognition, these being the racial types set up by Hooton. Hooton classifies the American Indians into: Basket Maker, Pseudo-Negroid, Pseudo-Australoid, Plains, long-faced Europeans, Pseudo-Apino and Large Hybrid types. He specifically states that the names of his races represent genetic relationships. For the most part his classification was based upon a large number of measurements taken on one long series (Pecos skeletal materials). As stated before, there is no empirical evidence for the genetic relationship of these racial types, nor is there justification, on a genetic basis, for the use of his terms. Furthermore, racial types should be based upon a large number of skeletal series if they are to be representative of, and valid for, a large area such as North America.

Hrdlicka's classification of American Indian types is based upon the largest <sup>12</sup> number of measurements on the largest series of skeletal data. The types and the physical characteristics of each are based upon a firm foundation. However, his nomenclature of these types leaves much to be desired. He has classified his types as Algonkin, Siouan, Gulfid, etc. This terminology is very confusing when one considers the physical types of specific tribes, for one finds that there are Siouans of the Algonkin types (Iroquois), Algonkins of the Siouan type, and Plains tribes of the Gulfid types.

The classification I propose to use is one based upon the earlier works <sup>13</sup> of von Niekstedt and later modified by Georg Neumann. (C. Snow and A. Reardon <sup>14</sup> also use his classification). It appears to have none of the faults of the

---

10. Dixon, R.B. The Racial History of Man

11. Hooton, H.A. Indians of Pecos

12. Hrdlicka, Alex A Catalogue of Human Crania in the United States National Museum. Proc. of the U.S. National Museum, vol. 67, art. 7, 1917





other classifications. The racial groupings of the area under consideration here are called Sylvids, Centralids and Prairieids. The terms lend themselves easily to taxonomy. The Sylvids are characterized as dolichocephalic, hypsicranial, facially leptocuryprosopic and acrocranial. These tribes occupied the northeastern part of North America. The Centralid group occupied the northeastern section of North America and are characterized as brachycephalic, hypsicranial, broad-faced, with rugged cranial contours. The Prairieid race lived in the plains area of North America, and their diagnostic physical characteristics are low vaults, mesocephalic to dolichocephalic skulls, wide flat faces, and prominent noses. Since von Hückstedt's data was not statistically documented and since Georg Neumann's statistics were not published, I offer as proof for the existence of such types as the data gathered by Ales Hrdlicka.<sup>15</sup> I suggest that, in interpreting this data, one remember that the type here described as Sylvid has been named Aganikin by Hrdlicka, while the Centralid correspond to Hrdlicka's Gulfid and Prairieid to his Siouan.

In the following chart I shall present three pooled series of skulls which I consider to be representative of the Sylvid, Centralid, and Prairieid races.

12. (cont)

Hrdlicka, Ales Report on an additional collection of Skeletal Remains from Arkansas and Louisiana Journal of the Academy of Science of Florida

13. von Hückstedt, E. Rassenkunde und Völkergeschichte der Menschheit Stuttgart, 1934.

14. Personal communication

15. See note 12.



Chart Showing Racial Types in the Mississippi Area

<u>Measurements</u>	<u>Typical Sylvids(18)</u>	<u>Typical Centralics(19)</u>	<u>Typical Prairids</u> <u>(20)</u>
L	182.5	171	179.2
B	137	139	139
LB	104.2	98	---
h'	141.7	138.5	129.8
B'	93.4	---	---
J	136.5	141.4	141.8
GH	123.1	124	121.2
G'H	75.1	74.7	76.2
OML	42.9	42.6 *	42 *
OL	35	34	35.9
NB	26.1	24	26.9
NL	54	50.6	54.6

Indices

100 B/L	75.39	81.5	77.8
" H/L	77.6	80.9	75.9
" H/B	103.1	94.8	92.6
" GH/J	89.65	87	85.5
" G'H/J	54.88	51.4	53.7
" OL/OML	81.82	---	81.4 *

17. Abbreviations used are those agreed upon at the Birmingham Archaeological Conference, 1938. For meanings of abbreviations see the following page.

18. Georg Neumann The Crania from the Hagan Mound and Their Relation to those of Two Late-Prehistoric Populations of Central Illinois. p.80 from: Transactions of the American Philosophical Society, vol. LXXII, Pt. I, Nov. 1941. Pooled Maples Mills crania

19. Ales Hrdlicka The Anthropology of Florida Florida State Hist. Soc., no. 1, 1922, p. 118. Pooled series from Florida

20. Ales Hrdlicka Catalogue of Human Crania in the United States National Museum, vol. 69, art. 5, 1927, p. 59. Yankton Sioux Indian crania (pooled).



Table of Contents

Page	Chapter
1	Introduction
15	Chapter I
35	Chapter II
55	Chapter III
75	Chapter IV
95	Chapter V
115	Chapter VI
135	Chapter VII
155	Chapter VIII
175	Chapter IX
195	Chapter X
215	Chapter XI
235	Chapter XII
255	Chapter XIII
275	Chapter XIV
295	Chapter XV
315	Chapter XVI
335	Chapter XVII
355	Chapter XVIII
375	Chapter XIX
395	Chapter XX
415	Chapter XXI
435	Chapter XXII
455	Chapter XXIII
475	Chapter XXIV
495	Chapter XXV
515	Chapter XXVI
535	Chapter XXVII
555	Chapter XXVIII
575	Chapter XXIX
595	Chapter XXX
615	Chapter XXXI
635	Chapter XXXII
655	Chapter XXXIII
675	Chapter XXXIV
695	Chapter XXXV
715	Chapter XXXVI
735	Chapter XXXVII
755	Chapter XXXVIII
775	Chapter XXXIX
795	Chapter XL
815	Chapter XLI
835	Chapter XLII
855	Chapter XLIII
875	Chapter XLIV
895	Chapter XLV
915	Chapter XLVI
935	Chapter XLVII
955	Chapter XLVIII
975	Chapter XLIX
995	Chapter L

THE UNIVERSITY OF CHICAGO PRESS  
1963

Printed in the United States of America  
All rights reserved

Library of Congress Cataloging in Publication  
Data  
1. *Table of contents* (Form) -- 1963  
2. *Table of contents* (Form) -- 1963  
3. *Table of contents* (Form) -- 1963  
4. *Table of contents* (Form) -- 1963  
5. *Table of contents* (Form) -- 1963  
6. *Table of contents* (Form) -- 1963  
7. *Table of contents* (Form) -- 1963  
8. *Table of contents* (Form) -- 1963  
9. *Table of contents* (Form) -- 1963  
10. *Table of contents* (Form) -- 1963  
11. *Table of contents* (Form) -- 1963  
12. *Table of contents* (Form) -- 1963  
13. *Table of contents* (Form) -- 1963  
14. *Table of contents* (Form) -- 1963  
15. *Table of contents* (Form) -- 1963  
16. *Table of contents* (Form) -- 1963  
17. *Table of contents* (Form) -- 1963  
18. *Table of contents* (Form) -- 1963  
19. *Table of contents* (Form) -- 1963  
20. *Table of contents* (Form) -- 1963  
21. *Table of contents* (Form) -- 1963  
22. *Table of contents* (Form) -- 1963  
23. *Table of contents* (Form) -- 1963  
24. *Table of contents* (Form) -- 1963  
25. *Table of contents* (Form) -- 1963  
26. *Table of contents* (Form) -- 1963  
27. *Table of contents* (Form) -- 1963  
28. *Table of contents* (Form) -- 1963  
29. *Table of contents* (Form) -- 1963  
30. *Table of contents* (Form) -- 1963  
31. *Table of contents* (Form) -- 1963  
32. *Table of contents* (Form) -- 1963  
33. *Table of contents* (Form) -- 1963  
34. *Table of contents* (Form) -- 1963  
35. *Table of contents* (Form) -- 1963  
36. *Table of contents* (Form) -- 1963  
37. *Table of contents* (Form) -- 1963  
38. *Table of contents* (Form) -- 1963  
39. *Table of contents* (Form) -- 1963  
40. *Table of contents* (Form) -- 1963  
41. *Table of contents* (Form) -- 1963  
42. *Table of contents* (Form) -- 1963  
43. *Table of contents* (Form) -- 1963  
44. *Table of contents* (Form) -- 1963  
45. *Table of contents* (Form) -- 1963  
46. *Table of contents* (Form) -- 1963  
47. *Table of contents* (Form) -- 1963  
48. *Table of contents* (Form) -- 1963  
49. *Table of contents* (Form) -- 1963  
50. *Table of contents* (Form) -- 1963  
51. *Table of contents* (Form) -- 1963  
52. *Table of contents* (Form) -- 1963  
53. *Table of contents* (Form) -- 1963  
54. *Table of contents* (Form) -- 1963  
55. *Table of contents* (Form) -- 1963  
56. *Table of contents* (Form) -- 1963  
57. *Table of contents* (Form) -- 1963  
58. *Table of contents* (Form) -- 1963  
59. *Table of contents* (Form) -- 1963  
60. *Table of contents* (Form) -- 1963  
61. *Table of contents* (Form) -- 1963  
62. *Table of contents* (Form) -- 1963  
63. *Table of contents* (Form) -- 1963  
64. *Table of contents* (Form) -- 1963  
65. *Table of contents* (Form) -- 1963  
66. *Table of contents* (Form) -- 1963  
67. *Table of contents* (Form) -- 1963  
68. *Table of contents* (Form) -- 1963  
69. *Table of contents* (Form) -- 1963  
70. *Table of contents* (Form) -- 1963  
71. *Table of contents* (Form) -- 1963  
72. *Table of contents* (Form) -- 1963  
73. *Table of contents* (Form) -- 1963  
74. *Table of contents* (Form) -- 1963  
75. *Table of contents* (Form) -- 1963  
76. *Table of contents* (Form) -- 1963  
77. *Table of contents* (Form) -- 1963  
78. *Table of contents* (Form) -- 1963  
79. *Table of contents* (Form) -- 1963  
80. *Table of contents* (Form) -- 1963  
81. *Table of contents* (Form) -- 1963  
82. *Table of contents* (Form) -- 1963  
83. *Table of contents* (Form) -- 1963  
84. *Table of contents* (Form) -- 1963  
85. *Table of contents* (Form) -- 1963  
86. *Table of contents* (Form) -- 1963  
87. *Table of contents* (Form) -- 1963  
88. *Table of contents* (Form) -- 1963  
89. *Table of contents* (Form) -- 1963  
90. *Table of contents* (Form) -- 1963  
91. *Table of contents* (Form) -- 1963  
92. *Table of contents* (Form) -- 1963  
93. *Table of contents* (Form) -- 1963  
94. *Table of contents* (Form) -- 1963  
95. *Table of contents* (Form) -- 1963  
96. *Table of contents* (Form) -- 1963  
97. *Table of contents* (Form) -- 1963  
98. *Table of contents* (Form) -- 1963  
99. *Table of contents* (Form) -- 1963  
100. *Table of contents* (Form) -- 1963

## Definitions of Abbreviations used in Crania Charts

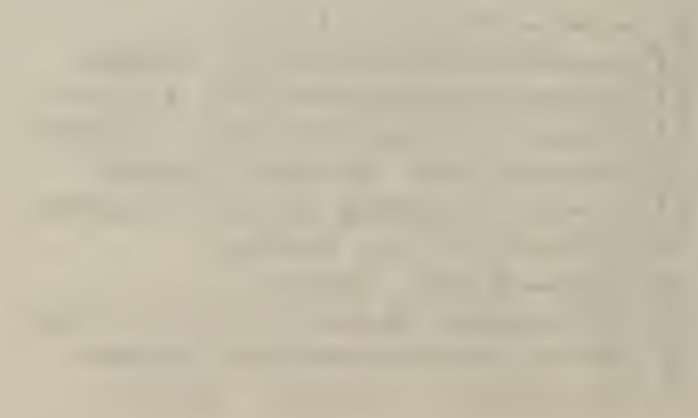
### Measurements

L-----Glabella to Opisthocephion length  
B-----Maximum breadth  
Ls-----Basion to nasion length  
h'-----Basion to bregma height  
B'-----Minimum frontal breadth  
GL'-----Basion to prosthion length  
BOM-----Biorbital breadth  
J-----Bisymphonic breadth  
CH-----Total facial height  
G'H-----Upper facial height  
MO-----Anterior interorbital breadth  
OML-----Orbital breadth  
OL-----Orbital height  
NB-----Nasal breadth  
NL-----Nasal length  
ML-----Mxillo-alveolar length  
MB-----Mxillo-alveolar breadth

### Indices

100 B/L-----Cranial index  
100 H/L-----Length-height index  
100 H'/B-----Breadth-height index  
100 B'/B-----Fronto-parietal index  
100 CH/J-----Total facial index  
100 G'H/J-----Superior facial index  
100 OML/OL-----Orbital index  
100 NB/NL-----Nasal index  
100 MB/ML-----Mxillo-alveolar index  
100 J/B-----Cranio-facial index  
100 B'/J-----Supra-frontal index

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION  
PUBLISHED WEEKLY  
CHICAGO, ILL., U.S.A.  
Subscription price, Five Dollars Per Annum in Advance.  
Single Copies, Fifteen Cents.  
Entered as Second-Class Matter, October 3, 1917.  
Postage paid at Chicago, Ill., and at additional mailing offices.  
Acceptance for mailing at special rate of postage provided for in  
Act of October 3, 1917, authorized on July 16, 1918.  
Copyright, 1919, by American Medical Association  
Published by the American Medical Association, 535 North Dearborn Street, Chicago, Ill.





## Definitions of Abbreviations used in Crania charts

### Measurements

L -----Glabella to Opisthocranion length  
B ----- Maximum breadth  
LB -----Basion to nasion length  
h' -----Basion to bregma height  
B' -----Minimum frontal breadth  
GL'-----Basion to prosthion length  
BOW-----Biorbital breadth  
J -----Bizygomatic breadth  
GH-----Total facial height  
G'H-----Upper facial height  
EOW-----Anterior interorbital breadth  
OML-----Orbital breadth  
OL-----Orbital height  
NB-----Nasal breadth  
NL-----Nasal length  
ML-----Maxillo-alveolar length  
MB-----" " breadth

### Indices

100 B/L----- Cranial index  
100 H'/L----- Length - height index  
100 H'/B-----Breadth - height index  
100 B'/B-----Fronto-parietal index  
100 GH/J-----Total facial index  
100 G'H/J-----Superior facial index  
100 OML/OL-----Orbital index  
100 Nb/NH-----Nasal index  
100 HB/HL-----Maxillo-alveolar index  
100 J/B ----- Cranio-facial index  
100 B'/J----- Zygo-frontal index

1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

1	1
2	2
3	3
4	4
5	5
6	6
7	7
8	8
9	9
10	10
11	11
12	12
13	13
14	14
15	15
16	16
17	17
18	18
19	19
20	20
21	21
22	22
23	23
24	24
25	25
26	26
27	27
28	28
29	29
30	30
31	31
32	32
33	33
34	34
35	35
36	36
37	37
38	38
39	39
40	40
41	41
42	42
43	43
44	44
45	45
46	46
47	47
48	48
49	49
50	50
51	51
52	52
53	53
54	54
55	55
56	56
57	57
58	58
59	59
60	60
61	61
62	62
63	63
64	64
65	65
66	66
67	67
68	68
69	69
70	70
71	71
72	72
73	73
74	74
75	75
76	76
77	77
78	78
79	79
80	80
81	81
82	82
83	83
84	84
85	85
86	86
87	87
88	88
89	89
90	90
91	91
92	92
93	93
94	94
95	95
96	96
97	97
98	98
99	99
100	100

Winnebago focus  
Controlled + Prained  
(pooled series ~~of History Winnebago~~)

[illegible]





## Fisher Focus

The anthropometric data from the Fisher site shows that 13 individuals belong to the Centralid type while 5 belong to the Sylvid type.<sup>1</sup> I have presented the individual series of measurements on each skull as well as the pooled Sylvid and Centralid groups.

<sup>1</sup> Sylvid--Burials Bm 78, 81, 71, W 100, Wm 101, 102.  
Centralid--all the other burials.



THE UNIVERSITY OF CHICAGO  
LIBRARY  
1100 EAST 58TH STREET  
CHICAGO, ILL. 60637  
TEL. 733-4331  
1968

UNIVERSITY OF CHICAGO PRESS  
54 EAST LAKE STREET  
CHICAGO, ILL. 60601

# Upper Mississippi

## Fishery Focus Pooled Sylvest and Central/Cocaine

	Sylvest	Central/Cocaine
L	182.67	176.3
B	139.5	145
h'	140.2	141.8
S	136.2	142.1
G/H	97	103.3
G'H	71	70.4
OML	71.05	70.1
OL	36.9	<del>82.5</del>
NB	25.6	26.7
NH	55.15	52.
<del>HL</del>		
<del>HB.</del>		
100 B/L	76.9	82.5
100 H/L	76.75	80.5
100 G/H	95.88	78.99
100 G'H/S	50.35	49.42
100 OL/OML	80.85	84.38
100 NB/NB	45.97	50.15

?

$$\begin{array}{r} 100.9 \\ 139.5 \sqrt{140.2} \\ \underline{139} \\ 1200 \end{array}$$

$$\begin{array}{r} 0.98 \\ 145 \sqrt{141.8} \\ \underline{1303} \\ 1138 \\ \underline{1126} \\ 110 \end{array}$$

Handwritten header text at the top of the page, possibly a title or date.

Left Column	Middle Column	Right Column
1.00	1.00	1.00
2.00	2.00	2.00
3.00	3.00	3.00
4.00	4.00	4.00
5.00	5.00	5.00
6.00	6.00	6.00
7.00	7.00	7.00
8.00	8.00	8.00
9.00	9.00	9.00
10.00	10.00	10.00
11.00	11.00	11.00
12.00	12.00	12.00
13.00	13.00	13.00
14.00	14.00	14.00
15.00	15.00	15.00
16.00	16.00	16.00
17.00	17.00	17.00
18.00	18.00	18.00
19.00	19.00	19.00
20.00	20.00	20.00
21.00	21.00	21.00
22.00	22.00	22.00
23.00	23.00	23.00
24.00	24.00	24.00
25.00	25.00	25.00
26.00	26.00	26.00
27.00	27.00	27.00
28.00	28.00	28.00
29.00	29.00	29.00
30.00	30.00	30.00
31.00	31.00	31.00
32.00	32.00	32.00
33.00	33.00	33.00
34.00	34.00	34.00
35.00	35.00	35.00
36.00	36.00	36.00
37.00	37.00	37.00
38.00	38.00	38.00
39.00	39.00	39.00
40.00	40.00	40.00
41.00	41.00	41.00
42.00	42.00	42.00
43.00	43.00	43.00
44.00	44.00	44.00
45.00	45.00	45.00
46.00	46.00	46.00
47.00	47.00	47.00
48.00	48.00	48.00
49.00	49.00	49.00
50.00	50.00	50.00
51.00	51.00	51.00
52.00	52.00	52.00
53.00	53.00	53.00
54.00	54.00	54.00
55.00	55.00	55.00
56.00	56.00	56.00
57.00	57.00	57.00
58.00	58.00	58.00
59.00	59.00	59.00
60.00	60.00	60.00
61.00	61.00	61.00
62.00	62.00	62.00
63.00	63.00	63.00
64.00	64.00	64.00
65.00	65.00	65.00
66.00	66.00	66.00
67.00	67.00	67.00
68.00	68.00	68.00
69.00	69.00	69.00
70.00	70.00	70.00
71.00	71.00	71.00
72.00	72.00	72.00
73.00	73.00	73.00
74.00	74.00	74.00
75.00	75.00	75.00
76.00	76.00	76.00
77.00	77.00	77.00
78.00	78.00	78.00
79.00	79.00	79.00
80.00	80.00	80.00
81.00	81.00	81.00
82.00	82.00	82.00
83.00	83.00	83.00
84.00	84.00	84.00
85.00	85.00	85.00
86.00	86.00	86.00
87.00	87.00	87.00
88.00	88.00	88.00
89.00	89.00	89.00
90.00	90.00	90.00
91.00	91.00	91.00
92.00	92.00	92.00
93.00	93.00	93.00
94.00	94.00	94.00
95.00	95.00	95.00
96.00	96.00	96.00
97.00	97.00	97.00
98.00	98.00	98.00
99.00	99.00	99.00
100.00	100.00	100.00



# Fisher (continued)

	<u>38</u>	<u>25</u>	<u>51</u>	<u>37</u>	<u>69</u>	<u>101</u>	<u>102</u>	<u>19</u>	<u>96</u>	<u>22</u>
L	176	172	173	173	173	182	185	173	175.5	170
B	141	140	139	149	149	137	139	150	146	137
LB	<del>136</del> 98	110	—	110	103	—	—	100	109	110
h	136	143	—	145	138	143	137	138	149	133
B'										
GL'										
Bow										
J.	145	143	—	152	135	135	143	147	132	132
GH	98	110	—	100	102	—	—	99	107	102
G'H	71	70	68.3	75	65	67	—	76	76	68
E	—	—	—	—	—	—	—	—	—	—
JML	38	42.4	41.3	42.9	39.6	41.5	—	41.5	36.5	41.3
OL	31.7	31.7	35	40	34.5	33.3	—	36.5	31.7	34
NB	—	28.6	25	27.5	27	25.4	—	26.3	28	23
NH'	—	52.4	5.4	52.4	54.4	52.4	—	56.3	41.6	52.7
ML	57.5	—	56	54	54	—	—	—	54	—
MB	67.	66.7	66.7	60	69	—	—	66.3	67	—

B/L	80.1	81.4	80.3	86.1	86.1	75.2	75.1	86.7	84.3	80.3
H/L	77.2	83.1	—	83.8	80	78.5	74	80	86.1	78.4

H/B

B'/B

G/H/S	84.4	85.4	—	—	85.9	91.8	—	84.3	96.2	87.2
G'H/S	48.9	48.9	51	49.3	48.1	50	—	50.7	57.5	51.5
OL/OML	83.1	73.8	84.7	93.2	87.1	80.2	—	87.4	86.8	82.1
NB/NA	54.5	51.8	52.4	44.5	48.4	48.4	—	46.7	58.8	43.6

1 + 13/HL

S/B

B'/S





# Fisher Focus

Fisher Focus  
(Pooled series compiled from Langford's data)

(Complete series)

[illegible]

# Upper S Fishes

(Preliminary - not used for analysis)									
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120
121	122	123	124	125	126	127	128	129	130
131	132	133	134	135	136	137	138	139	140
141	142	143	144	145	146	147	148	149	150
151	152	153	154	155	156	157	158	159	160
161	162	163	164	165	166	167	168	169	170
171	172	173	174	175	176	177	178	179	180
181	182	183	184	185	186	187	188	189	190
191	192	193	194	195	196	197	198	199	200
201	202	203	204	205	206	207	208	209	210
211	212	213	214	215	216	217	218	219	220
221	222	223	224	225	226	227	228	229	230
231	232	233	234	235	236	237	238	239	240
241	242	243	244	245	246	247	248	249	250
251	252	253	254	255	256	257	258	259	260
261	262	263	264	265	266	267	268	269	270
271	272	273	274	275	276	277	278	279	280
281	282	283	284	285	286	287	288	289	290
291	292	293	294	295	296	297	298	299	300
301	302	303	304	305	306	307	308	309	310
311	312	313	314	315	316	317	318	319	320
321	322	323	324	325	326	327	328	329	330
331	332	333	334	335	336	337	338	339	340
341	342	343	344	345	346	347	348	349	350
351	352	353	354	355	356	357	358	359	360
361	362	363	364	365	366	367	368	369	370
371	372	373	374	375	376	377	378	379	380
381	382	383	384	385	386	387	388	389	390
391	392	393	394	395	396	397	398	399	400
401	402	403	404	405	406	407	408	409	410
411	412	413	414	415	416	417	418	419	420
421	422	423	424	425	426	427	428	429	430
431	432	433	434	435	436	437	438	439	440
441	442	443	444	445	446	447	448	449	450
451	452	453	454	455	456	457	458	459	460
461	462	463	464	465	466	467	468	469	470
471	472	473	474	475	476	477	478	479	480
481	482	483	484	485	486	487	488	489	490
491	492	493	494	495	496	497	498	499	500
501	502	503	504	505	506	507	508	509	510
511	512	513	514	515	516	517	518	519	520
521	522	523	524	525	526	527	528	529	530
531	532	533	534	535	536	537	538	539	540
541	542	543	544	545	546	547	548	549	550
551	552	553	554	555	556	557	558	559	560
561	562	563	564	565	566	567	568	569	570
571	572	573	574	575	576	577	578	579	580
581	582	583	584	585	586	587	588	589	590
591	592	593	594	595	596	597	598	599	600
601	602	603	604	605	606	607	608	609	610
611	612	613	614	615	616	617	618	619	620
621	622	623	624	625	626	627	628	629	630
631	632	633	634	635	636	637	638	639	640
641	642	643	644	645	646	647	648	649	650
651	652	653	654	655	656	657	658	659	660
661	662	663	664	665	666	667	668	669	670
671	672	673	674	675	676	677	678	679	680
681	682	683	684	685	686	687	688	689	690
691	692	693	694	695	696	697	698	699	700
701	702	703	704	705	706	707	708	709	710
711	712	713	714	715	716	717	718	719	720
721	722	723	724	725	726	727	728	729	730
731	732	733	734	735	736	737	738	739	740
741	742	743	744	745	746	747	748	749	750
751	752	753	754	755	756	757	758	759	760
761	762	763	764	765	766	767	768	769	770
771	772	773	774	775	776	777	778	779	780
781	782	783	784	785	786	787	788	789	790
791	792	793	794	795	796	797	798	799	800
801	802	803	804	805	806	807	808	809	810
811	812	813	814	815	816	817	818	819	820
821	822	823	824	825	826	827	828	829	830
831	832	833	834	835	836	837	838	839	840
841	842	843	844	845	846	847	848	849	850
851	852	853	854	855	856	857	858	859	860
861	862	863	864	865	866	867	868	869	870
871	872	873	874	875	876	877	878	879	880
881	882	883	884	885	886	887	888	889	890
891	892	893	894	895	896	897	898	899	900
901	902	903	904	905	906	907	908	909	910
911	912	913	914	915	916	917	918	919	920
921	922	923	924	925	926	927	928	929	930
931	932	933	934	935	936	937	938	939	940
941	942	943	944	945	946	947	948	949	950
951	952	953	954	955	956	957	958	959	960
961	962	963	964	965	966	967	968	969	970
971	972	973	974	975	976	977	978	979	980
981	982	983	984	985	986	987	988	989	990
991	992	993	994	995	996	997	998	999	1000

### Madisonville Focus

The series from Madisonville consists of 39 skulls. Unfortunately there is considerable variability within the group. However, the majority are Centralid (actually about 34). Thus in spite of the variability I am presenting a pooled series. The pooled series represents a Centralid type. I feel justified in presenting this pooled series for two reasons: one, a chart showing the 39 skulls would be cumbersome, and second, since the predominant type is Centralid and the pooled type is Centralid, an insignificant amount of masking has taken place by this pooling.







### Anderson Focus

This anthropometric data has been given to me by George Neumann. He has stated that there is little variability among the individuals of the group and that it was "safe to pool them."

As may be seen, the type is definitely Sylvid. In the light of the archaeological data, this is not surprising since the Anderson focus is the most Woodland-like focus of the Fort Ancient Aspect.

AMERICAN MEDICAL ASSOCIATION  
PUBLISHED WEEKLY  
CHICAGO, ILL., U.S.A.  
Vol. 10, No. 1, January 1917  
Subscription price, \$5.00 per annum in advance  
Single copies, 15 cents  
Entered as Second-Class Matter, June 26, 1902  
Postoffice at Chicago, Ill., under special  
permission of Postoffice Department  
Acceptance for mailing at special rate of  
postage provided for in Act of October  
3, 1917, authorized on July 10, 1918

## The Seneca Focus

The data available on the Iroquois is of three types: Ritchie's general observations lacking anthropometric data, Hrdlicka's data that is called Iroquois but may not be such since he considers any prehistoric skull from upper New York to be Iroquois, and the pooled series of Newman which were made from measurements on skulls excavated by W. Bray in western New York State at a known historic Seneca site. I have chosen the latter series as the one most trustworthy. Also, Newman has said that it is typical of all the Iroquois materials. I have also used his pooled series since the individual measurements show little variability.

These skulls are Sylvid in type. Also according to Ritchie they are identical with the Owasco physical type.<sup>22</sup> If one accepts Griffin's interpretation of Iroquois archaeology, that the Iroquois represent a basically Woodland (Owasco) people who have been influenced by Middle Mississippi culture, it is not surprising to find that they have a Sylvid physical type.<sup>23</sup>

<sup>22</sup>Ritchie, R. B. The Pre-Iroquoian Occupations of New York State. Rochester Museum of Art and Science, 1944. P. 101.

<sup>23</sup>Griffin, James.





## Spoon River

This cranial data comes from two mounds in Fulton County, Illinois, Fo<sup>14</sup> and Fo<sup>34</sup>. The series here presented represents the undeformed male population of these two prehistoric habitations.

Unfortunately George Neumann has usually presented these skulls as a pooled series. The data on individual crania show that this pooling is not justified and hides the true physical characteristics and racial types of the population. On the following pages I have presented the series of measurements and indices taken on each individual. These individual series show that the Spoon River focus population consisted of about 20 Centralids and 7 Sylvids. For comparative purposes I have pooled the Centralid and Sylvid series.

The Spoon River focus components indicate that the Centralid-Middle Mississippi correlation was close though not as close as that of the series previously presented. This lower radio-archaeological correlation may be explained by observing the geographical position and archaeological content of the Spoon River components. Geographically the Spoon River focus is situated in an area that was primarily Woodland. Also, archaeologically the Spoon River components show some Woodland admixture such as pottery with a cord marked surface finish, flexed burials, etc. Thus it would appear that Middle Mississippi Centralid group when migrating into the northern Woodland territory (Fulton County) mixed with the Sylvids already there.



Middle Miss.

Monks mound aspect

Spoon River Focus  
SPFOU component

Aggregated

~~FOU Total/Species~~

Aggregated

Number	-6	16	35	46	49	50	52	68	Mean	78	99	16	mean
L	171	127	172	180	177	171	175	179	—	183	179	187	—
B	138	143	144	141	136	145	144	141	—	135	128	143	—
L B	105	102	110	106	—	107	103	101	—	105	108	102	—
H	146	145	155	142	—	149	146	144	—	144	143	145	—
B	91	91	98	92	89	99	85	89	—	93	95	94	—
G-L	97	98	107	101	—	102	—	91	—	103	101	98	—
BOW	97	104	105	—	105	100	104	105	—	—	100	104	—
J	131	—	142	134	136	146	—	147	—	144	130	146	—
G H	115	—	133	125	119	123	—	127	—	—	113	125	—
G H	73	—	80	77	73	74	—	78	—	70	72	78	—
EOW	23	—	26	18	21	18	16	—	—	23	22	22	—
OML	41	—	44	—	46	44	46	—	—	—	43	45	—
OL	33	—	34	—	33	37	35	—	—	—	36	35	—
NB	27	—	30	26	31	28	25	30	—	28	27	22	—
NH	54	—	55	56	54	52	53	56	—	51	51	56	—
HL	51	—	60	55	60	52	—	57	—	—	52	59	—
MB	65	—	71	—	70	64	—	71	—	—	65	68	—

100 B/L	80.75	83.72	78.33	76.23	87.19	82.28	78.77
H/L	85.38	90.17	79.00	—	82.13	83.43	80.44
H/B	105.76	107.63	106.21	—	102.25	102.37	102.13
B/B	65.94	68.05	65.25	65.94	68.27	59.03	63.12
G H	87.78	93.66	89.73	87.50	84.24	—	86.34
G H	55.72	56.34	55.40	55.67	50.68	—	50.06
OL	80.98	72.27	—	71.73	54.09	76.08	—
NB/NH	150.00	84.84	46.43	87.41	53.84	47.17	53.07
H B/HL	127.40	112.67	—	116.66	132.64	—	124.66
S.B	94.42	98.61	48.58	100.10	100.68	—	104.25
B'S	64.45	69.01	66.14	65.44	67.81	—	60.54

73.77	71.51	76.47
78.64	74.88	77.54
106.66	111.72	101.39
68.88	24.22	65.73
—	86.92	85.61
48.61	55.38	83.42
—	83.72	77.77
84.70	52.44	50.00
—	125.00	115.25
106.66	104.56	102.10
64.58	73.08	64.38





































MEASUREMENTS AND INDICES OF THE ADULT MALE CRANIA FROM MOUNDS F<sup>14</sup>, F<sup>34</sup>, F<sup>85</sup>, AND F<sup>86</sup>

Mound	No.	1	5	8	9	17	21	40	44	45	47	48	49	50	51R	51L	52R	52L	54	55	60	61	62	63	66	72	(8)100 (1)	(17)100 (1)	(17)100 (8)	(9)100 (8)	(47)100 (45)	(48)100 (45)	R (52)100 (51)	L (52)100 (51)	(54)100 (55)	(61)100 (60)	(65)100 (62)	(45)100 (8)	(9)100 (45)		
F <sup>14</sup> ...	6	171	105	138	91	146	123	97	97	131	115	73	26	23	41	41	33	33	27	54	51	65	43	40	107	85.5	80.70	85.38	105.79	65.94	87.78	55.72	80.48	80.48	50.00	127.45	93.02	94.92	69.46		
	16	187	102	143	94	145	125	98	104	146	125	78	26	22	45	44	35	36	28	56	59	68	48	42	113	85.5	76.47	77.54	101.39	65.78	85.61	53.42	77.77	79.54	50.00	115.25	87.50	102.10	64.38		
	35	172	110	144	98	155	131	107	105	142	133	80	28	26	44	42	34	33	30	55	63	71	50	38	105	85	83.72	90.17	107.63	68.05	93.66	56.34	77.27	78.57	54.54	112.69	76.00	98.61	69.01		
	46	180	106	141	92	142	123	101	...	139	125	77	24	18	...	45	...	36	26	56	56	55	...	49	39	112	84	78.33	79.00	100.71	65.25	89.93	55.40	...	80.00	46.43	79.59	98.58	66.19		
	49	177	...	136	89	...	123	...	...	136	119	73	25	21	46	45	33	34	31	54	60	70	50	44	111	83	76.83	...	...	...	87.50	53.67	71.73	75.55	57.41	116.66	88.00	100.00	65.44		
	50	171	107	145	99	149	129	102	100	146	123	74	23	18	44	44	37	35	28	52	52	69	49	43	106	88	84.79	87.13	102.75	68.27	84.24	50.68	84.09	79.54	53.84	132.69	87.75	100.68	67.81		
	58	175	103	144	85	146	129	...	...	...	147	78	...	...	...	45	...	...	37	25	53	...	...	...	...	103	82	82.28	83.43	101.38	59.03	...	...	86.05	47.17	...	...	...	...	...	...
	68	179	101	141	89	144	120.5	97	105	147	127	70	...	...	...	42	...	...	32	30	56	57	46	44	109	84	78.77	80.44	102.13	63.12	86.39	53.06	...	71.11	53.57	124.56	93.61	104.25	60.54		
	78	183	105	135	93	144	116	103	103	144	...	72	27	23	...	42	...	...	36	28	51	...	46	...	...	77	78.77	78.69	106.66	68.88	...	48.61	85.71	51.90	...	...	106.66	64.58			
	99	179	108	128	95	143	120	101	100	130	113	70	25	22	43	42	36	37	27	51	52	65	44	43	94	85	71.51	79.88	111.72	74.22	86.92	55.38	83.72	88.09	52.94	125.00	97.72	101.56	73.08		
F <sup>34</sup> ...	5	189	107	136	97	147	...	105	101	140	120	69	...	22	44	43	33	33	28	51	60	63	51	37	97	82.5	71.96	77.77	108.09	71.32	85.71	49.29	75.00	70.74	54.90	105.00	72.55	102.94	69.29		
	7	184	111	144	92	153	...	102	106	...	124	76	27	21	46	47	37	36	29	52	58	74	44	44	...	85.5	78.26	83.15	106.25	63.89	...	...	80.43	76.59	55.77	127.58	100.00	...	...	...	...
	10	187	121	141	101	154	...	106	100	...	125	73	...	...	42	...	34	36	25	52	58	61	46	34	98	87	75.40	82.35	109.22	71.63	...	...	80.95	48.08	105.17	73.91	...	...	...	...	
	21	175	110	143	92	149	...	101	103	145	120	76	24.5	18	47	46	36	36	25	56	56	67	47	41	108	87.5	81.71	85.14	104.20	64.34	82.76	52.41	76.59	78.26	44.64	119.64	87.23	101.40	63.45		
	25	177	101	145	101	149	...	97	98	145	114	69	24	18	44	42	33	33	25	49	52	...	45	37	113	84	81.92	84.18	102.76	69.66	78.62	47.59	75.00	78.57	51.02	...	82.22	100.00	69.66		
	28	183	103	138	99	143	...	104	...	...	...	82	...	22	...	45	35	35	29	60	58	67	47	38	...	82	75.41	78.14	103.62	71.74	...	...	80.43	82.22	48.33	115.52	80.85	...	...	...	...
	35	185	109	136	103	145	...	102	103	140	125	76	25	20	46	45	37	37	26	54	53	77	47	43	109	83	72.73	77.54	106.62	76.10	89.29	54.29	80.43	82.22	48.15	...	102.94	73.93			
	40	172	103	132	98	140	...	107	103	...	...	74	...	...	...	...	31	32	...	50	61	77	51	43	...	79	76.71	81.40	106.06	74.24	...	...	...	...	126.23	84.31	...	...	...	...	
	90	188	98	135	89	145	...	98	98	144	127	78	...	20	42	40	34	34	24	53	57	63	48	42	99	83	71.81	77.13	107.41	65.93	88.19	54.17	80.95	85.00	45.28	110.53	87.50	106.07	61.81		
	109	183	107	141	90	139	...	110	101	139	121	75	27.5	22	43	43	33	33	27	52	60	68	52	40	99	78	77.05	75.96	98.58	63.83	87.05	53.96	76.74	76.74	51.92	113.33	76.92	98.58	64.75		
F <sup>85</sup> ...	137	174	106	139	99	144	...	102	100	134	123	78	...	22	45	42	33	35	27	59	59	69	54	42	98	82	79.88	82.76	103.60	71.22	91.79	58.21	73.33	83.33	45.76	116.95	77.77	96.40	73.88		
	160	180	104	143	92	141	...	105	98	133	115	72	23	17	44	44	36	35	26	54	56	60	52	35	...	...	...	79.44	78.33	98.60	64.34	86.47	54.14	81.82	79.55	48.15	107.14	67.31	93.01	69.17	
	163	190	...	145	102	...	...	...	107	145	119	76	25	22	46	46	36	36	25	55	52	...	43	41	106	87	76.32	...	...	...	82.07	52.41	78.26	78.26	45.45	...	95.35	100.00	70.34		
	165	179	99	142	98	147	...	104	105	140	127	76	28	24	45	44	33	34	24	51	60	63	51	37	97	77	79.33	82.12	103.52	69.01	90.71	54.29	73.33	77.27	47.06	105.00	72.55	98.59	70.00		
	167	181	104	145	98	142	...	98	105	144	121	74	30	23	44	44	33	32	27	49	55	68	44	40	95	87.5	80.11	78.45	97.93	67.59	84.03	51.39	75.00	72.73	55.10	123.64	90.91	99.31	68.06		
	D55	173	101	134	83	142	...	102	99	136	122	74	26	22	41	41	32	32	27	53	56	69	49	42	115	79.5	77.46	82.08	105.97	61.94	89.71	54.41	78.05	78.05	50.94	123.23	85.71	101.49	61.03		
	D128	188	...	146	95	...	...	...	...	143	...	78	24	19	43	...	33	33	27	56	58	72	49	44	...	...	...	77.66	...	...	65.07	54.54	76.74	76.74	48.21	124.14	89.80	97.95	66.43		
	8	177	109	138	97	144	...	102	99	135	120	70	23	18	45	45	35	35	27	48	55	65	50	38	97	83	77.97	81.36	104.35	70.29	88.89	51.85	77.78	77.78	56.25	118.18	76.00	97.83	71.85		
	11	175	104	136	89	138	...	93	100	137	115	73	24	21	44	4																									





subsistence	gullery	Points	mits		
none	brushed gullery	   			
$\frac{1}{2}$ agave - $\frac{1}{2}$ wild plant cobaes - Corn, chile	conjugated gullery	   			
$\frac{1}{2}$ agave - $\frac{1}{2}$ wild plant					
mainly corn & beans & cococilli, squash cotton, tobacco	Zaguit gullery	  	long square & border $\frac{1}{2}$		
mainly wild out but Cave Corn, beans, squash ground cotton	Cl Porico Demand II gullery	  	$\frac{2}{2} - \frac{1}{1}$	simple coil net Joona Cotton	
		  	$\frac{2}{2}$ with $\frac{1}{1}$ boards $\frac{2}{2}$	trained flanket simple coil net	
some 					
mainly wild plants but squash, beans, ground		   	$\frac{2}{2} - \frac{1}{1}$		
mainly wild <sup>plants</sup> but beans & squash		  	$\frac{1}{1} \frac{3}{3} \frac{2}{2}$	simple coil net & full turn coil net	
some animal bone mainly wild food plants but some beans		  			

Sierra Madre of Tamp.





# Correlation of Middle Mississippi Crania with the Centalid and Sylvid Physical Types

Measurements	Typical Centralid	Kentucky stone graves	Tennessee stone graves	Koger's Island Lu25 & Lu92	Spoon River Centralids	Spoon river Sylvids	Typical Sylvids
L	171	167	171.9	169.5	178.4	185.1	182.5
B	139	146	143	153.2	141	133	137
Lb	98			101.3	105.2	104.6	
h'	138.5	142	143.2	144.3	146	144.58	141.7
B'			92.2	96.7	93.7	95.69	
Gl'			98.5	97.1	91	101.6	
BOW				103			102.6
J	141.4	139	139.7	144.6	140.4	140.89	136.5
Gh	124	121	122	128.8	122.9	122	123.1
G'h	74.7	74	74.5	75.7	78.7	75	75.1
EOW				43.8	19	21.6	
OML	42.6*		34	34.7	44.1	44	42.9
OL	34				34		35
NB	24	26	26	25.5	26.2	27	27.26.1
NL	50.6	52	52	52.8	51.4	53.7	54
ML	--	--	56	53.3	56.7	54	54.6
MB							

## Indices

100 B/L	81.5	87.2	83.7	90.5*	79.58	73.59	75.39
h'/L	80.9	85	83.8	85.4	82.44	78.10	77.6
h8/B	99.8	97	98.4	93.1	103.34	106.5	103.12
B'/B	--	--	--	62.7	66.64	70.56	67.97
GH/J	87	86	87.5	86	80.77	88.14	89.65
G'H/J	52.4	53	50	50	50.35	52.33	54.88
OL/OML	--			28.4	77.38	74.57	81.82
NB/Nh	47.7	50	50	48.2	50.29	50.63	48.53



# Correlation of the Upper Mississippi Crania with the Centalid, Sylvid and Prairid Physical Types

M	Type Syl.	Seneca	Ander- son	Fisher Syl.	Type Cent.	Fisher Cent.	Madison- ville	Winne- bago Cent.	Type Prairid	Winnebago Prairid
L	12.5	186.9	181.8	182.67	171	176.3	178.5	170	179.2	175.7
B	137	137.5	136.3	139.5	139	145	143.9	149	139	146
LB		105	104.5				103.7	102		95
h'	141.7	141.7	140.5	140.2	138.5	141.8	136.3	140	129.8	127.6
B'		94	94				94	93		94.3
GL'		100.17	102.6				99.5	94		101
BOW		100.20	110.8				101.1			
J	136.5	136.8	140.2	136.2	141.4	142.1	141.2	140	141.8	144
GH	123.1	125	123.9		124	123.5	121	--	121.2	124
G'H	75.1	76.1	74.4	71	74.7	70.4	72	74	76.2	75
EOW		20.87	19.7				20	17	42.0	19
OML	42.9	42.88	43.7	41.05	42.6	40.1	43.3	40	35.9	44
OL	35	33.88	34.5	39.6	34	37.2	33.6	34	26.9	35.7
NB	26.1	27.87	26.9	25.6	24	26.7	21.1	25		26
NH	54	54.89	53.3	55.1	50.6	52	52.6	53	54.6	54.7
ML	54.6	56.17	54.2		--		55.4	52		53
MB		66.13	68.8				65	66		63.7

B/L	75.39	73.26	75.16	76	81.5	82.5	80.2	87.6	77.8	83.12
H/L	77.76	75.94	76.91	76.75	80.9	80.5	76.58	88.8	75.9	72.66
H/L	103.1	103.7	103.5	100.8	99.8	98	94.58	93.8	92.6	87.57
B'/B		68.61	68.80				65.33	65.36		
GH/J	89.65	91.34	88.65	95.88	87.80	78.94	85.23	86.12	85.5	86.11
G'H/j	54.88	55.47	53.13	50.35	52.4	49.42	51.34	53.6	53.7	52.07
OML	81.82		50.65	90.85		84.38	77.13	74.3	81.4	81.07
NB/Nh	48.52	50.91	50.65	45.97	47.5	50.15	51.78	47.9	49.4	47.57

Table showing the results of the analysis of the soil samples collected from the various plots during the year 1902.

Plot No.	Area (sq. ft.)	Depth (in.)	Soil Type	Moisture (%)	Temperature (°C)	pH	Nitrogen (%)	Phosphorus (ppm)	Potassium (ppm)	Calcium (ppm)	Magnesium (ppm)	Sulfur (ppm)	Iron (ppm)	Zinc (ppm)	Copper (ppm)	Manganese (ppm)	Silica (ppm)	Alumina (ppm)	Other (ppm)
1	100	0-10	Loam	15	15	7.5	0.1	10	100	1000	500	50	100	10	1	1	1000	1000	100
2	100	10-20	Silt	12	12	7.2	0.05	5	50	500	250	25	50	5	0.5	0.5	500	500	50
3	100	20-30	Clay	10	10	7.0	0.02	2	20	200	100	10	20	2	0.2	0.2	200	200	20
4	100	30-40	Sand	8	8	7.8	0.01	1	10	100	50	5	10	1	0.1	0.1	100	100	10
5	100	40-50	Gravel	5	5	8.0	0.005	0.5	5	50	25	2.5	5	0.5	0.05	0.05	50	50	5
6	100	50-60	Rock	3	3	8.2	0.002	0.1	1	10	10	1	1	0.1	0.01	0.01	10	10	1
7	100	60-70	Bedrock	2	2	8.5	0.001	0.05	0.5	5	5	0.5	5	0.05	0.005	0.005	5	5	0.5
8	100	70-80	Basalt	1	1	9.0	0.0005	0.01	0.1	1	1	0.1	1	0.01	0.001	0.001	1	1	0.1
9	100	80-90	Gneiss	0.5	0.5	9.5	0.0001	0.001	0.01	0.1	0.1	0.01	0.1	0.001	0.0001	0.0001	0.1	0.1	0.01
10	100	90-100	Granite	0.2	0.2	10.0	0.00005	0.0001	0.001	0.01	0.01	0.001	0.01	0.0001	0.00001	0.00001	0.01	0.01	0.001



## Koyer Island

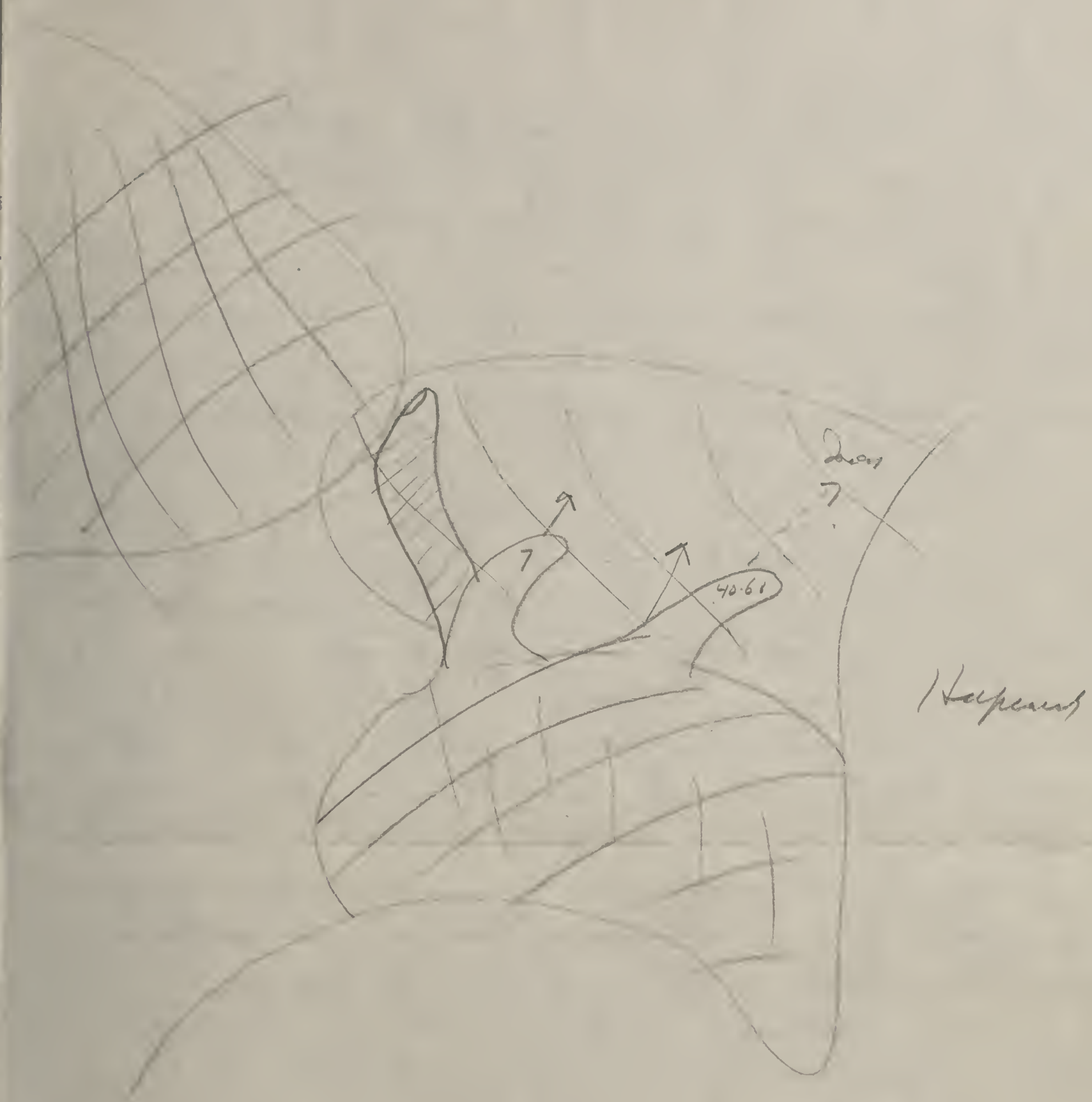
The Koyer Island cranial materials come from two sites in the Pickwick basin: Lu<sup>v92</sup> and Lu<sup>o25.16</sup>. Both are Middle Mississippi sites. The measurements and indices on each individual cranium are not available to me so I must present their pooled series. This pooled series that I am presenting is not the one published, but one made by Snow on a larger series at a later date. Since Snow and Newman are competent physical anthropologists and since concerning their individual measurements and indices they have stated "We feel justified in pooling them to form a total 'Koyer Island' series"<sup>17</sup> I believe that their pooling of the cranial data does not mask the characteristic of each individual series.

The individuals who make up this pooled series are all males and both deformed and undeformed. The pooled data indicate the people of Koyer's Island (Middle Mississippi culture) were of the Centralid type.

<sup>16</sup> Newman, C. T. and C. T. Snow, "Skeletal Material from Pickwick Basin", from W. S. Webb and D. L. De Jarnette, Archaeological Survey of Pickwick Basin in the Adjacent Portions of the States of Alabama, Mississippi and Tennessee. B. A. A. Bulletin 124, 1942.

<sup>17</sup> Ibid. P. 141.





Denial

~~Centralist~~  
Wolfgang

Sylvia

Atkinson





## Kentucky Stone Graves

Archaeologically the skeletal material from the stone graves or stone cists of Kentucky may be identified as being Middle Mississippi. No other groups have been ascertained to have had this particular type of burial custom.

The series here presented was published by Ales Hrdlicka in an article "The Anthropology of Florida", a publication of the Florida Historical Society, No. 1, 1922. This particular data may be found on pages 111 and 112. The series represent a series of 21 males, cranially undeformed. Since the measurements and indices taken on each individual show considerable uniformity, I have presented this anthropometric data as a pooled series.

A glance at the accompanying data indicates that the group was round-headed, hypsiceranial, and broad faced and therefore of the Centralid type. Thus there appears to be a rather close correlation between the Centralid race and the Middle Mississippi culture in Kentucky.



## Tennessee Stone Graves

The material was measured by Marshall L. Newman and is as yet unpublished. It represents a reworking of the crania that R. C. Fuller originally measured in 1916 and which formed the basis for his doctoral dissertation at Harvard. The group is highly selected in that all are males and all are undeformed. Within this group a few skulls (about three) were definitely dolicocephalic, deep vaulted, and narrow faced, but the majority of the individuals were round headed, high vaulted, and wide faced (Centralid). Since the majority were Centralid and since the pooled series represents a Centralid group, I do not believe my statistics have been marked by pooling. Therefore I have used a pooled series.

The archaeological material associated with these crania is Middle Mississippi. Therefore, there appears to be again a close correlation (37 to 40) between the Centralid physical type and the Middle Mississippi culture.





Middle Mississippi Phase  
Tenn. - Cumberland Aspect?  
Stone Graves in Tenn. ~~Form~~  
(Pooled Series from Tenn.)

L	—	41	—	171.9
B		40		143
LB		—		—
h'		28		143.2
B'		111		92.2
GL'		68		98.5
BOW		—		—
J.		72		139.7
G+H		75		122
G'H		82		24.5
EW		—		—
OML		—		—
OL		89		34.3
NB		43		26
NH'		47		52
ML		81		56.0
MB		82		68.7

Indices

100 B/L	35	83.7
" H/L	24	83.8
" <del>B/H</del> H'/B	23	98.4
" B'/B	—	—
" G+H/J	49	87.5
" G'H/J	62	52.4
" OL/OML	—	—
" NB/NH'	43	50
" H+B/H+L	—	—
" J/B	—	—
" B'/J	—	—



A Doctoral Problem in Physical Anthropology  
presented to the Department of Anthropology  
in fulfillment of the requirements for the  
Degree of Doctor of Philosophy.

by

Richard T. McNeish

January 22, 1945





## The Problem

In his book "Races of Europe" Coon by the use of such terms as Corded, Bell-Beaker, Ladogan, etc., presumes a rather close racial correlation between cultural development and geographical distribution. What evidence for this racio-archaeological correlation can be found in the Upper and Middle Mississippi cultures?



## Chapter I

### Introduction

Before attempting to examine the evidence of a close racio-archaeological correlation in the Upper and Middle Mississippi culture, I believe that I should examine the manner in which this concept of a close racio-culture correlation was employed by Coon in his book "Races of Europe." Coon's book was primarily an attempt to describe the racial types of Europe. At the outset, however, Coon found that any definition of "Race as a group of people reasonably unified in the physical sense and living in one place" was inadequate when applied to human types found in Europe.<sup>1</sup> For this inadequacy he gave two reasons. First, one could not "draw the borderline between that place and the next," and, second, one could not tell "where one race leaves off and the next begins."<sup>2</sup> He believed though that this dilemma might be resolved "with the application of a third dimension, that of history."<sup>3</sup> History, with numerically adequate and competently documented physical data, might show what places were centers of racial dispersion, what the races were, and which places had functioned as points of intermediacy and blending. Therefore, Coon reconstructed the racial and cultural history of Europe,

<sup>1</sup>Coon, Carleton S. "The Races of Europe". New York. The Macmillan Company, 1939. P. 11.

<sup>2</sup>Ibid. P. 11.

<sup>3</sup>Ibid. P. 12.





and ultimately created a classification of races in Europe based on the geographical location of the groups, the physical characteristics of the groups and history of those groups. In reconstructing the racial history of Europe, the assumption implicit in his writing is that when two groups are found to have been of the same racial type this indicates that there existed a genetic connection between those groups and their separation has been caused by migration and later isolation. He also presumes that many of these racial migrations were accompanied by diffusion of certain cultural complexes. Thus he speaks of Corded, Ladogan, Bell-Beaker, etc. migrations in which a race with its correlative culture moved in Europe. (A criticism or evaluation of his work is not attempted in this paper as it seems irrelevant to the problem at hand.)

As may now be apparent the problem I am attempting to solve is of a different nature from the one of Coon. Coon attempted to define the physical types of Europe by describing their physical characteristics, geographical location, and history. In presenting his history, he indicated or assumed that often physical types were highly correlated with culture types. My problem is quite the reverse, for I shall attempt to indicate that a high correlation exists between certain American races and the Upper and Middle Mississippi culture. To show this correlation it will be necessary to describe the history and location of these cultures, and to examine the physical types that



occur in each. In presenting the racio-archaeological connections, I shall, in passing, define the races of that area. Thus, the problem fundamental for Coon I shall but touch upon, while the problem of racio-cultural correlation, that Coon merely used as a tool and took little notice of, will be of foremost importance in this paper.

Since I shall deal with a variety of different types of data in the solution of the problem, I believe that I should here state the method I shall use, and thus indicate the manner in which the various topics are logically connected. The method may briefly be stated as follows: first, I shall define the Upper and Middle Mississippi cultures and briefly indicate what is known of their histories; next, I shall discuss the racial classifications that have been applied to the people of the Upper and Middle Mississippi area (and the rest of North America), then I shall present a selected series of anthropometric data for the various cultural divisions of the Mississippi patterns which will indicate what racial types may be closely correlated with the two cultures; and, finally, I shall summarize the evidence for a close racio-cultural correlation in the Upper and Middle Mississippi culture.







## Chapter II

### The Middle and Upper Mississippi Cultures

Archaeologically the culture content of the Upper and Middle Mississippi phases has long been known. The history of these two phases is not yet fully worked out, but recently great steps in that direction have been undertaken. For this reason, I shall briefly define the Upper Mississippi and Middle Mississippi phases, then, on a more speculative plane, present their histories, as I see them.

Dr. Thorne Duell, in Appendix I, entitled "The Application of a Classificatory Method to Mississippi Valley Archaeology" in Rediscovering Illinois, page 207 to 226, defined the Middle Mississippi as that archaeological manifestation whose culture assemblage includes the following diagnostic traits:

- "1. Truncated pyramidal mounds, often in groups, employed primarily as substructures
2. Houses with rectangular floor outlines
3. Wattle and daub house walls
4. Equal-armed pipes in varieties other than the projecting stemmed
5. The employment of marine, cut marine shells and pearls for personal adornment
6. Pottery: effigy, beaker, plate and other specialized forms of common occurrence
7. Pottery: two or more wares present
8. Pottery: narrow, trailing, incising (whole clay is plastic) scratching, etching etc. (after drying or firing) are the chief techniques of decoration



9. Pottery: designs commonly include bands or chains of backward triangles, arches, scrolls and spirals
10. Pottery trowels
11. Awl-sharpeners."

The following were given as Upper Mississippi phase determinate traits:

- "1. Mounds produced incidental to burial
2. Houses with circular or elliptical floor outlines
3. Pipe: projecting, stem variety of equal-armed type
4. Personal adornment, use of perforated canine teeth of animals
5. Pottery: common olla generally sole form
6. Pottery: a utilitarian ware usually only one present
7. Pottery: chief technique of decoration are trailing, broad-line incising and punctuating
8. The drawshave (bone beamer)
9. The flat, perforated needle from deer ribs and other animal bones."

The history of Middle Mississippi has seldom been dealt with by archaeologists in publication, though I believe that all of them, upon being questioned, would probably present a very similar history of that culture. The picture here presented is largely taken from the article

by Ford and Willey in the American Anthropologist, Vol. , 194 .

The Middle Mississippi culture seems to have been born somewhere in the south along the Mississippi River. The most plausible ancestor that has thus far been brought forth is the





Troyville culture of Louisiana. Many of the culture elements of the Middle Mississippi had a Middle American similarity, so that it has been hypothicated that these elements, thrust upon the Troyville culture gave rise to the Coles Creek culture. This in turn gave rise to all the other Middle Mississippi manifestations. Around 1200 it appears that the members of this southern culture migrated northward along the river and established their culture anew. Rather late in the Middle Mississippi culture period further Mexican elements appeared to form the Buzzard Cult. Just previous to the time of French colonization there was a gradual retreat southward of this Middle Mississippi, and in historic times the French found various Muskogean people possessing a Middle Mississippi culture and living south of the Ohio River. On purely archaeological grounds, one might expect to find that the Middle Mississippi culture, since it had been carried by the migration of its originators, had a uniform physical type. The validity of this hypothesis will be tested later in this paper.

The history of the Upper Mississippi culture is probably less well known than that of Middle Mississippi phase. Dr. James Griffin of the University of Michigan, however, has recently contributed much to our knowledge of Upper Mississippi and, presently will publish a paper on its history in the Michigan Academy of Science papers. I have seen the manuscript form of this paper, and the history of Upper Mississippi here presented will be based upon it.



Dr. Griffin treats Upper Mississippi as a blend of Middle Mississippi and Woodland.<sup>3a</sup> This blending took place in varying degrees, and the different degrees of blending formed the various aspects of the Upper Mississippi phase. The Iroquois aspect is seen as a basically Woodland culture that received second-hand influences from Middle Mississippi.<sup>4</sup> "The Fort Ancient aspect... represents a Middle Mississippi offshoot which merged culturally with a basic Woodland group."<sup>5</sup> The Madisonville and Baum foci of this aspect culturally seem to represent a strong Middle Mississippi influence with few Woodland elements; while the Anderson and Fuert group seem to have been basically a Woodland group, only tinged by Middle Mississippi. The Fisher focus of an unknown aspect of the Upper Mississippi phase appears to be a merging basic Middle Mississippi group with but a touch of Woodland.<sup>5</sup> Dr. Griffin at present believes that the Oneota aspect of Upper Mississippi is a Middle Mississippi culture that had diffused into a Woodland territory (like Aztalan) and that in turn was influenced by Plains Mississippi.<sup>7</sup> Certain foci of the Oneota aspect have been identified as Hiouan (the Winnebago, Iowa, Oto, and Osage.) Speculation based upon our archaeological evidence would lead one to the conclusion that the Upper Mississippi culture (since it is a mixture of Woodland and Middle Mississippi) will probably have a low racial correlation.

<sup>3a</sup> Griffin, James. The Fort Ancient Aspect. University of Michigan Press, 1943. Chapter XV.

<sup>4</sup> Griffin, James. "The Iroquois in American Prehistory." Papers of the Michigan Acad. of Science, Art, and Letters. Vol. XXIX, 1943.

<sup>5</sup> Ibid. Note 3, page 308.







6 cont. John Griffin, personal communication

7 Griffin, James. "The Iroquois in American Prehistory."  
Note 3, page 300.



Chapter III  
The Races of North America with particular reference to the Middle and  
Upper Mississippi Areas

Since the conceptual framework of the problem of this paper has been derived from Coon, I shall define race in his terms:—"...a group reasonably unified in the physical sense" (i.e.— have a number of physical characteristics in common) "and living in one place."<sup>9</sup> Fortunately, this basic definition need not be here appended (as Coon deemed necessary in discussing the races of Europe) since the dilemma of overlapping physical types and areas did not occur in Upper and Middle Mississippi times. From the dates at hand it would appear that the races of this area may be easily recognized as to their physical characteristics and geographical location.

The races of this area, however, have been poorly defined. The reasons for their faulty definition are numerous, the most prevalent ones being: subjective bias, inadequate measurements, and poor terminology. I therefore believe that it is necessary to deal briefly with a few of the poorer classifications in order to illustrate why I have accepted the particular definition used here.

The first classification of American Indian races that I shall consider is the one originated by Dixon. He has classified the American Indians into eight groups: Proto-Australoids, proto-Negroids, Caribbeans, Mediterraneans, Palae-Alpines, Alpines, Mongoloids, and Ural types. His classification is based upon three indices: cephalic, length-height and nasal indices. Furthermore he believes that these various races owe their existence to migrations of similarly named people from the Old World. My objections are obvious. The nomenclature used by Dixon, infers genetic relationships that are totally unproven, the criteria used for racial classification (three indices) are very

---

9. Coon, ibid., p. 11.

The first of these is the fact that the  
the following page.

the first of these is the fact that the  
the following page.



10

tenuous, and the derivation of these races has no substantiating evidence.

The second classification which I shall discuss has received widespread  
11  
recognition, these being the racial types set up by Hooton. Hooton classifies the American Indians into: Basket maker, Pseudo-Negroid, Pseudo-Australoid, Plains, long-faced Europeans, Pseudo-Alpine and Large hybrid types. He specifically states that the names of his races represent genetic relationships. For the most part his classification was based upon a large number of measurements taken on one long series (Pecos skeletal materials). As stated before, there is no empirical evidence for the genetic relationship of these racial types, nor is there justification, on a genetic basis, for the use of his terms. Furthermore, racial types should be based upon a large number of skeletal series if they are to be representative of, and valid for, a large area such as North America.

Hrdlicka's classification of American Indian types is based upon the largest  
12  
number of measurements on the largest series of skeletal data. The types and the physical characteristics of each are based upon a firm foundation. However, his nomenclature of these types leaves much to be desired. He has classified his types as Algonkin, Siouan, Gulfid, etc. This terminology is very confusing when one considers the physical types of specific tribes, for one finds that there are Siouans of the Algonkin types (Iroquois), Algonkins of the Siouan type, and Plains tribes of the Gulfid types.

The classification I propose to use is one based upon the earlier works  
13  
of von Richtert and later modified by Georg Neumann. (C. Snow and M. Huxton  
14  
also use his classification). It appears to have none of the faults of the

---

10. Dixon, R.B. The Racial History of Man

11. Hooton, E.A. Indians of Pecos

12. Hrdlicka, Alex Catalogue of Human Crania in the United States National Museum. Proc. of the U.S. National Museum, vol. 67, art. 7, 1927



other classifications. The racial groupings of the area under consideration here are called Sylvids, Centralids and Prairids. The terms lend themselves easily to taxonomy. The Sylvids are characterized as dolichocephalic, hypsicranial, facially leptoeuryprosopic and acrocranial. These tribes occupied the northeastern part of North America. The Centralid group occupied the northeastern section of North America and are characterized as brachycephalic, hypsicranial, broad-faced, with rugged cranial contours. The Prairid race lived in the plains area of North America, and their diagnostic physical characteristics are low vaults, mesocephalic to dolichocephalic skulls, wide flat faces, and prominent noses. Since von Eickstedt's data was not statistically documented and since Georg Neumann's statistics were not published, I offer as proof for the existence of such types the data gathered by Ales Hrdlicka.<sup>15</sup> I suggest that, in interpreting this data, one remember that the type here described as Sylvid has been named Algonkin by Hrdlicka, while the Centralid correspond to Hrdlicka's Gulfid and Prairid to his Siouan.

In the following chart I shall present three pooled series of skulls which I consider to be representative of the Sylvid, Centralid, and Prairid races.

---

12. (cont)

Hrdlicka, Ales Report on an additional collection of Skeletal Remains from Arkansas and Louisiana Journal of the Academy of Science of Florida

13. von Eickstedt, E. Massenkunde und Rassengeschichte der Menschheit Stuttgart, 1934.

14. Personal communication

15. See note 12.







Chart Showing Racial Types in the Mississippi Area

<u>Measurements</u>	<u>Typical Sylvids(18)</u>	<u>Typical Centrals(19)</u>	<u>Typical Frairids(20)</u>
L	182.5	171	179.2
B	157	159	159
LB	104.2	88	---
h'	141.7	138.5	129.8
B'	93.4	---	---
J	136.5	141.4	141.8
GH	123.1	124	121.2
G'H	75.1	74.7	76.2
OLL	42.9	42.6 *	42 *
OL	35	34	35.9
NB	26.1	24	26.9
ML	54	53.6	54.6

Indices

100 B/L	75.39	81.5	77.8
" H/L	77.6	80.9	75.9
" H/B	103.1	84.8	92.6
" GH/J	82.65	87	85.5
" G'H/J	54.88	53.4	53.7
" OL/OLL	81.32	---	81.4 *

17. Abbreviations used are those agreed upon at the Birmingham Archaeological Conference, 1938. For meanings of abbreviations see the following page.

18. Georg Neumann The Crania from the Hagen Mound and Their Relation to that of the Late Prehistoric Populations of Central Illinois. p.80 from: Transactions of the American Philosophical Society, vol. XXXII, Pt. I, Nov. 1941. Pooled Mayles Mills crania

19. Ales Hrdlicka The Anthropology of Florida Florida State Hist. Soc., no. 1, 1922, p. 118. Pooled series from Florida

20. Ales Hrdlicka Catalogue of Human Crania in the United States National Museum, vol. 69, art. 5, 1927, p. 59. Yankton Sioux Indian crania (pooled).



## Definitions of Abbreviations used in Crania Charts

### Measurements

L-----Glabella to Opisthocranium length  
B-----Maximum breadth  
LB-----Basion to nasion length  
h'-----Basion to bregma height  
B'-----Minimum frontal breadth  
GL'-----Basion to prosthion length  
BOW-----Biorbital breadth  
J-----Bizygomatic breadth  
GH-----Total facial height  
G'H-----Upper facial height  
EOV-----Anterior interorbital breadth  
OML-----Orbital breadth  
OL-----Orbital height  
NB-----Nasal breadth  
NL-----Nasal length  
ML-----Maxillo-alveolar length  
MB-----Maxillo-alveolar breadth

### Indices

100 B/L-----Cranial index  
100 H/L-----Length-height index  
100 H'/B-----Breadth-height index  
100 B'/B-----Fronto-parietal index  
100 GH/J-----Total facial index  
100 G'H/J-----Superior facial index  
100 OML/OL-----Orbital index  
100 Nb/NL-----Nasal index  
100 MB/ML-----Maxillo-alveolar index  
100 J/B-----Cranio-facial index  
100 B'/J-----Zygo-frontal index





### Fisher Focus

The anthropometric data from the Fisher site shows that 18 individuals belong to the Centralid type while 6 belong to the Sylvid type.<sup>1</sup> I have presented the individual series of measurements on each skull as well as the pooled Sylvid and Centralid groups.

<sup>1</sup> Sylvid--Burials B 73, 81, W 1, W 100, W 101, 102.  
Centralid--all the other burials.



### Madisonville Focus

The series from Madisonville consists of 39 skulls. Unfortunately there is considerable variability within the group. However, the majority are Centralid (actually about 34). Thus in spite of the variability I am presenting a pooled series. The pooled series represents a Centralid type. I feel justified in presenting this pooled series for two reasons: one, a chart showing the 39 skulls would be cumbersome, and second, since the predominant type is Centralid and the pooled type is Centralid, an insignificant amount of masking has taken place by this pooling.





### Anderson Focus

This anthropometric data has been given to me by George Neumann. He has stated that there is little variability among the individuals of the group and that it was "safe to pool them."

As may be seen, the type is definitely Sylvid. In the light of the archaeological data, this is not surprising since the Anderson focus is the most Woodland-like focus of the Fort Ancient Aspect.

The first part of the book is devoted to a discussion of the basic concepts of the theory of functions of a real variable. In the second part, the theory of the definite integral is developed, and in the third part, the theory of the indefinite integral is treated. The fourth part is devoted to the theory of the differential and integral calculus of functions of several variables. The fifth part is devoted to the theory of the differential and integral calculus of functions of a complex variable. The sixth part is devoted to the theory of the differential and integral calculus of functions of a vector variable. The seventh part is devoted to the theory of the differential and integral calculus of functions of a tensor variable. The eighth part is devoted to the theory of the differential and integral calculus of functions of a spinor variable. The ninth part is devoted to the theory of the differential and integral calculus of functions of a quaternion variable. The tenth part is devoted to the theory of the differential and integral calculus of functions of an octonion variable. The eleventh part is devoted to the theory of the differential and integral calculus of functions of a sedenion variable. The twelfth part is devoted to the theory of the differential and integral calculus of functions of a hyperoctonion variable. The thirteenth part is devoted to the theory of the differential and integral calculus of functions of a hyperquaternion variable. The fourteenth part is devoted to the theory of the differential and integral calculus of functions of a hyperoctonion variable. The fifteenth part is devoted to the theory of the differential and integral calculus of functions of a hyperquaternion variable. The sixteenth part is devoted to the theory of the differential and integral calculus of functions of a hyperoctonion variable. The seventeenth part is devoted to the theory of the differential and integral calculus of functions of a hyperquaternion variable. The eighteenth part is devoted to the theory of the differential and integral calculus of functions of a hyperoctonion variable. The nineteenth part is devoted to the theory of the differential and integral calculus of functions of a hyperquaternion variable. The twentieth part is devoted to the theory of the differential and integral calculus of functions of a hyperoctonion variable.

## The Seneca Focus

The data available on the Iroquois is of three types: Ritchie's general observations lacking anthropometric data, Hrdlicka's data that is called Iroquois but may not be such since he considers any prehistoric skull from upper New York to be Iroquois, and the pooled series of Newman which were made from measurements on skulls excavated by W. Bray in western New York State at a known historic Seneca site. I have chosen the latter series as the one most trustworthy. Also, Newman has said that it is typical of all the Iroquois materials. I have also used his pooled series since the individual measurements show little variability.

These skulls are Sylvid in type. Also according to Ritchie they are identical with the Owasco physical type.<sup>22</sup> If one accepts Griffin's interpretation of Iroquois archaeology, that the Iroquois represent a basically Woodland (Owasco) people who have been influenced by Middle Mississippi culture, it is not surprising to find that they have a Sylvid physical type.<sup>23</sup>

<sup>22</sup>Ritchie, W. B. The Pre-Iroquoian Occupations of New York State. Rochester Museum of Arts and Science, 1944. P. 101.

<sup>23</sup>Griffin, James.





## Spoon River

This cranial data comes from two mounds in Fulton County, Illinois, Fo<sup>14</sup> and Fo<sup>34</sup>. The series here presented represents the undeformed male population of those two prehistoric habitations.

Unfortunately George Neumann has usually presented these skulls as a pooled series. The data on individual crania show that this pooling is not justified and hides the true physical characteristics and racial types of the population. On the following pages I have presented the series of measurements and indices taken on each individual. These individual series show that the Spoon River focus population consisted of about 20 Centralids and 7 Sylvids. For comparative purposes I have pooled the Centralid and Sylvid series.

The Spoon River focus components indicate that the Centralid-Middle Mississippi correlation was close though not as close as that of the series previously presented. This lower racio-archaeological correlation may be explained by observing the geographical position and archaeological content of the Spoon River components. Geographically the Spoon River focus is situated in an area that was primarily Woodland. Also, archaeologically the Spoon River components show some Woodland admixture such as pottery with a cord marked surface finish, flexed burials, etc. Thus it would appear that Middle Mississippi Centralid group when migrating into the northern Woodland territory (Fulton County) mixed with the Sylvids already there.



## Koyer Island

The Koyer Island cranial materials come from two sites in the Pickwick basin: Lu<sup>V92</sup> and Lu<sup>625</sup>.<sup>16</sup> Both are Middle Mississippi sites. The measurements and indices on each individual cranium are not available to me so I must present their pooled series. This pooled series that I am presenting is not the one published, but one made by Snow on a larger series at a later date. Since Snow and Seman are competent physical anthropologists and since concerning their individual measurements and indices they have stated "We feel justified in pooling them to form a total 'Koyer Island' series"<sup>17</sup> I believe that their pooling of the cranial data does not mask the characteristic of each individual series.

The individuals who make up this pooled series are all males and both deformed and undeformed. The pooled data indicate the people of Koyer's Island (Middle Mississippi culture) were of the Centralid type.

<sup>16</sup> Newman, C. T. and C. T. Snow, "Skeletal Material from Pickwick Basin", from P. C. Webb and D. L. De Jarnette, Archaeological Survey of Pickwick Basin in the Adjacent Portions of the States of Alabama, Mississippi and Tennessee. U. S. A. A. Bulletin 124, 1942.

<sup>17</sup> Ibid. P. 141.



AMERICAN MEDICAL ASSOCIATION  
PUBLISHED WEEKLY  
CHICAGO, ILL., U.S.A.  
Vol. 10, No. 1, January 1917  
Subscription price, \$5.00 per annum in advance  
Single copies, 15 cents  
Entered as Second-Class Matter, June 26, 1902  
Postoffice at Chicago, Ill., under special  
permission of Postoffice Department  
Acceptance for mailing at special rate of  
postage provided for in Act of October  
3, 1917, authorized on July 1, 1918  
Copyright, 1917, by American Medical Association  
Printed at the American Medical Association  
Press, 535 North Dearborn Street, Chicago, Ill.

Published by the American Medical Association  
535 North Dearborn Street, Chicago, Ill.  
Subscription orders, notices, and other  
communications should be sent to the  
Editor, American Medical Association,  
535 North Dearborn Street, Chicago, Ill.



## Kentucky Stone Graves

Archaeologically the skeletal material from the stone graves or stone cists of Kentucky may be identified as being Middle Mississippi. No other groups have been ascertained to have had this particular type of burial custom.

The series here presented was published by Ales Hrdlicka in an article "The Anthropology of Florida", a publication of the Florida Historical Society, No. 1, 1922. This particular data may be found on pages 111 and 112. The series represent a series of 31 males, cranially undeformed. Since the measurements and indices taken on each individual show considerable uniformity, I have presented this anthropometric data as a pooled series.

A glance at the accompanying data indicates that the group was round-headed, hypsiceranial, and broad faced and therefore of the Centralid type. Thus there appears to be a rather close correlation between the Centralid race and the Middle Mississippi culture in Kentucky.



## Tennessee Stone Graves

The material was measured by Marshall L. Newman and is as yet unpublished. It represents a reworking of the crania that F. C. Fuller originally measured in 1916 and which formed the basis for his doctoral dissertation at Harvard. The group is highly selected in that all are males and all are undeformed. Within this group a few skulls (about three) were definitely dolichocephalic, deep vaulted, and narrow faced, but the majority of the individuals were round headed, high vaulted, and wide faced (Centralid). Since the majority were Centralid and since the pooled series represents a Centralid group, I do not believe my statistics have been marked by pooling. Therefore I have used a pooled series.

The archaeological material associated with these crania is Middle Mississippi. Therefore, there appears to be again a close correlation (37 to 47) between the Centralid physical type and the Middle Mississippi culture.





The above figures are approximate values to the Department of Agriculture  
in publication of the Department of the Interior of the Department of the Interior  
and the Department of the Interior of the Department of the Interior  
(to be used in the Department of the Interior)

Q. A. # 1

